

Abstract

Disclosed are basic aluminum halides having enhanced antiperspirant efficacy; methods of making such materials and antiperspirant compositions containing such basic aluminum halides, and optionally an amino acid, salts of amino acids, antimicrobial agents, or an organic solvent having at least two carbon atoms and at least one hydroxy group and mixture thereof and methods of making such mixtures. Basic aluminum halides having enhanced antiperspirant efficacy are produced by reacting (a) aluminum powder; (b) an aluminum halide; and (c) water at a temperature greater than about 85°C. This reaction is maintained until reaction products having an Al:halide ratio of about 1.2:1 to 1.5:1 and preferably 1.3 to 1.4:1; and a solution solids concentration of about 30-40 weight percent on an anhydrous basis are obtained. The products are characterized as having a Size Exclusion Chromatography (HPLC) Test Band I of less than 5%, preferably less than 1%, Band II percent aluminum value of 20 – 60% preferably about 35 to 55%, Band III percent aluminum value of 10 to 35% preferably 15 – 30% and Band IV value of 15 to 50% and preferably 25 to 35% and sum of peak 3 and 4 areas of at least 45% and no more than 70% and preferably 65%. The enhanced efficacy basic aluminum chloride salts of this invention are more economical to produce, show enhanced efficacy and are more stable compared to the conventional enhanced efficacy aluminum salts which show rapid degradation of Band III to Band II peak areas ratio are less irritant and more skin friendly.